

Healthy Water



Everyone in New England deserves clean and safe water, whether for drinking, for swimming or for recreation. We've made enormous progress in achieving this goal—the most noteworthy example, 92 percent of the region's community drinking water supplies had no health-based violations last year. But, as we celebrate the 30th anniversary of the Clean Water Act, challenges still remain. More than a third of New England's streams and rivers are still unsafe for swimming, boating and other activities, especially after rainstorms and other wet weather.

Pollution-driven beach closures continue to be commonplace—last summer, the region's saltwater and freshwater beaches had more than 750 closure days, including more than 100 on Cape Cod alone. Tackling these problems requires multiple strategies. Much of our focus is on combined sewer overflows and “nonpoint” pollution such as storm water runoff, illicit discharges and failing septic systems. We're also targeting specific watersheds, especially those serving large populations such as Long Island Sound and the Charles River.

Rhode Island Pen Maker Leads Way In Cutting Pollution

A.T. Cross in Lincoln, RI makes about every exotic writing instrument imaginable. Scanning the company's cavernous manufacturing floor, visitors see countless rows and racks of pens of all shapes and styles crafted from steel, brass, plastic and aluminum. Cleaning these pens and pen parts for processing is a critical task. For years A.T. Cross relied on toxic solvents to do the job, but that practice has changed as the company has moved to embrace pollution reduction and pollution prevention in its programs.

A.T. Cross has been “greening” its manufacturing operations since the early 1990s. But since joining EPA's Metal Finishing Strategic Goals Program, the effort has really gained momentum. By replacing most of its solvent-based cleaners with water-based systems, emissions of trichloroethane, a toxic solvent, have fallen by 90 percent since 1993. By recycling its cleaning water, water use has been cut by a third, or nearly six million gallons a year. Even the cost of treating the company's wastewater has dropped—by nearly two thirds. Catherine Benjamin, the company's senior environmental safety engineer, credits much of the progress to the Strategic Goals Program, a partnership between EPA and the metal finishing industry to help companies go “beyond compliance” in reducing pollution.

To participate, companies must agree to specific goals, including 50 percent reductions in metal discharges and water use, 25 percent reductions in energy use and 90 percent reductions in air emissions. A.T. Cross is among 50 New England companies in the program and they have already reduced their overall water use by 41 percent, energy use by 27 percent and metal discharges by 67 percent. “The information sharing is great,” says Benjamin, whose company joined the program in 1997. “We didn't have the resources that we have now. Before we had to research everything on our own.”



PROTECTING OUR DRINKING WATER

EPA's mission has long been focused on ensuring safe drinking water, but in the wake of Sept. 11 and the anthrax scare we have redoubled our efforts. EPA New England moved quickly last fall to help the region's 12,000 public water supply systems better protect their supplies from possible terrorist attacks. In tandem with the six New England states and the New England Water Works Association, we held more than a dozen emergency security workshops to share information with suppliers, provide access to security experts and work on model emergency plans. We also developed a *Self-Help Guide for Security and Emergency Planning* to support small drinking water systems in their response efforts. The guide includes important information on security, system-wide vulnerability assessments and plant operations.

Emergency planning is just one of many strategies EPA is pursuing to make New England's drinking water supplies safer. Strong enforcement is one such tool, whether in pursuing the massive cleanup of the 14,000-acre Massachusetts Military Reservation on Cape Cod or conducting region-wide inspections to ensure that underground storage tanks (USTs) are complying with new, more-stringent construction requirements. Last year we conducted 149 UST inspections which led to 33 citations.

Ensuring that public water suppliers are assessing potential long-term contamination threats to their water sources is another priority. Our state partners have completed more than 700 assessments of community drinking water sources and all must be done by a 2003 deadline. EPA's new *Top Ten List for Water Security* will be released with those reports.



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— Catherine Benjamin

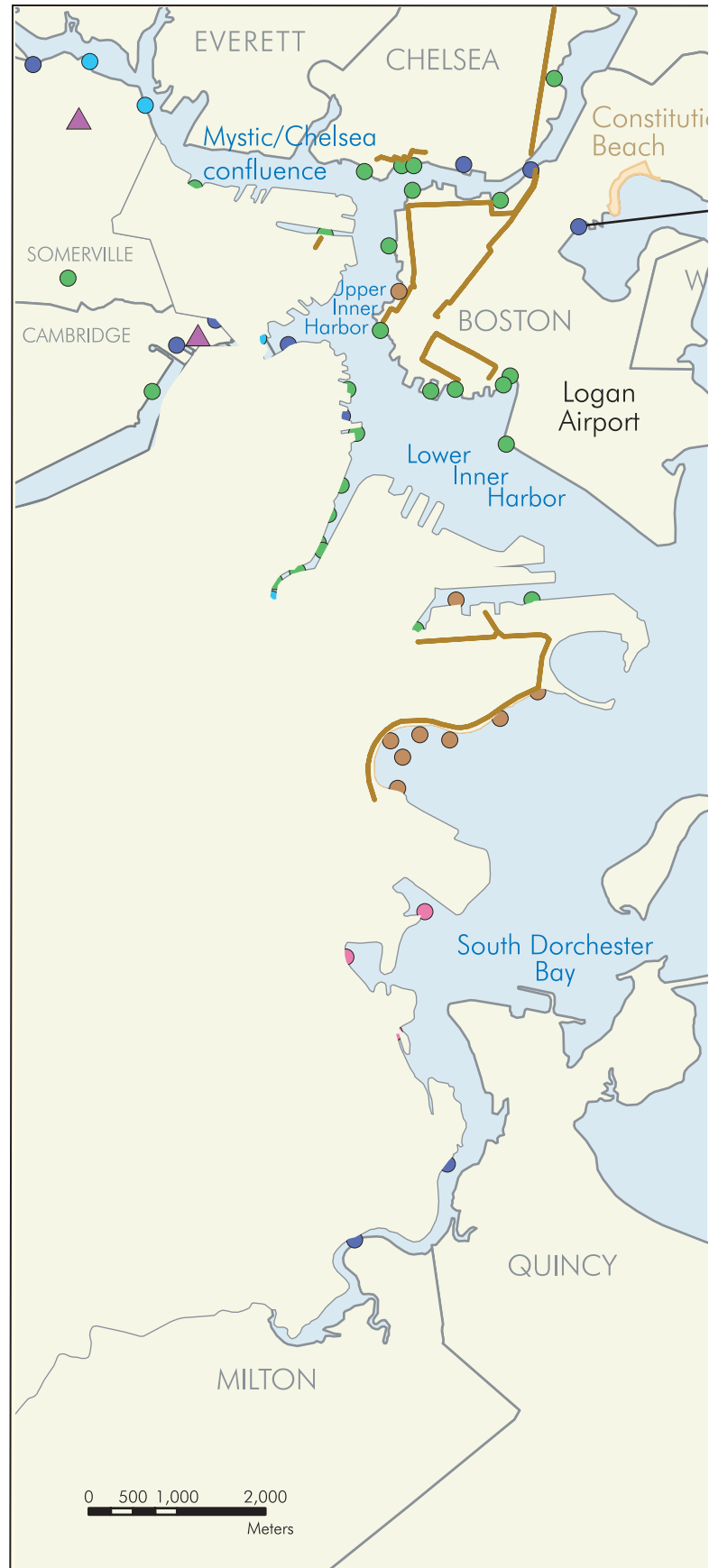
And, lastly, we're boosting public awareness about the importance of safe drinking water. Among our most successful efforts is our Drinking Water Business Initiative, a voluntary program to spur the region's 25,000 businesses operating in source water areas to minimize their own pollution threats. In partnership with our states and water associations, we're also supporting an outreach campaign to educate the region's 800,000 private well owners about potential contaminants in their well water and periodic testing that they should consider. Studies indicate that many private wells in the region are contaminated with at least trace levels of radon, arsenic and other pollutants, some of which are naturally occurring. Reflecting high public health concerns about arsenic, EPA Administrator Christie Whitman decided last year to tighten the arsenic standard for public drinking water, which for utilities starts in 2006.

RESTORING OUR RIVERS, LAKES AND BAYS

Contrary to public perception, much of the pollution fouling our beaches and waterways is not from sewage plants, factory pipes and other point pollution sources. One of the biggest sources is nonpoint pollution coming from storm runoff, illicit discharges and dumping into storm drains, failing septic systems, boater waste and an array of other sources.

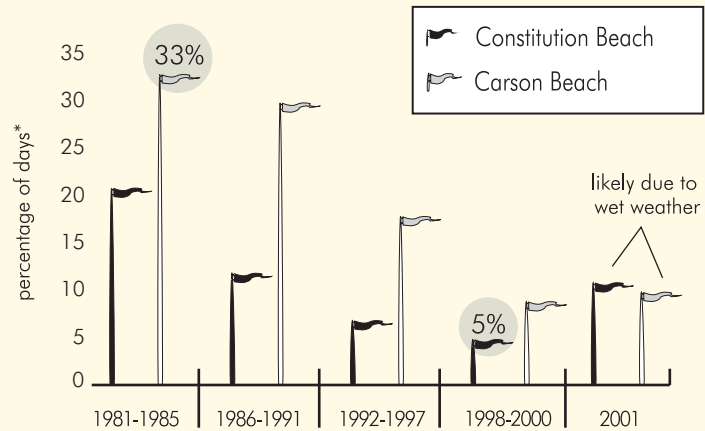
One of our biggest priorities is storm water runoff—the water from rain and snow that runs off streets, parking lots, yards, agricultural lands and construction sites carrying with it sediment, oil, pesticides, toxics and other pollutants into storm drains, which flow to our rivers and lakes. In 1998, more than 1,500 beach closings and advisories in coastal and Great Lake communities were attributed to storm water. During the course of a year, erosion from a one-acre construction site may yield 20 to 150 tons of sediment if not properly managed.

We are tackling the problem on a number of fronts, including a new rule announced in 1999 to address storm water pollution in priority areas. Building on similar requirements for larger construction sites





Boston Beaches Becoming Cleaner



*Average percentage of days water samples failed swimming standards

source: Data provided by Massachusetts Water Resources Authority

Boston Harbor is substantially cleaner, but water quality continues to be a problem at harbor beaches. Improving these swimming conditions will require major reductions in pollution from combined sewer overflow (CSO) and storm water. EPA's biggest priority in the coming years is making sure CSOs are removed from Carson Beach.

Legend

CSO Outfalls

Action

- Closed by 2008
- Closed
- Minimized
- Treatment
- Treatment/Closed by 2008

CSO Facilities

Action

- ▲ Planned
- ▲ To be Upgraded
- ▲ Upgraded/Eliminated
- Proposed Pipeline (for abating CSOs)

sources: MassGIS, MWRA (CSO and beach closings) MDC (beach closings)

and municipalities, the new regulations will require by March 2003 the implementation of appropriate storm water management practices at construction sites disturbing between one to five acres, and development of municipal storm water management programs for urbanized portions of hundreds of New England communities. We've hosted dozens of workshops and meetings over the past 18 months to educate municipal officials and the construction industry on the new Phase II storm water rule.

We're also focusing attention on public education and innovative technologies. As part of our Charles River cleanup, for example, EPA and the Natural Resources Conservation Services created a storm water education handbook for communities to educate residents on the damage that runoff causes and how they can reduce those impacts. We also joined forces with the Massachusetts Institute of Technology this year on a first-of-its-kind national

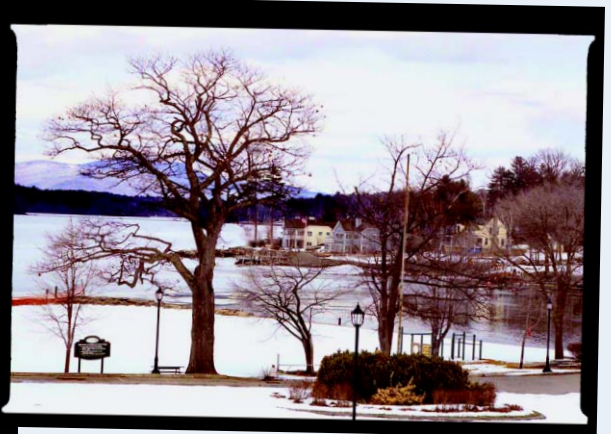
competition for engineers to develop innovative measures for managing storm water at the individual residential lot level.

Enforcement is another tool we're using, the most noteworthy case being our \$1.4 million settlement last year with Amtrak for widespread storm water-related violations in the late 1990s at nine Amtrak facilities in Massachusetts, Rhode Island and Connecticut.

Sewage discharges from combined sewer overflow (CSO) pipes are another reason why many of the region's rivers and harbors remain unsafe for fishing and swimming. Across New England, more than 100 communities are burdened with CSO pipes that discharge hundreds of millions of gallons of untreated sewage and storm water into waterways after heavy rains. Many communities experience direct sanitary sewer overflows (SSOs) from their sewer systems as a result of line blockages, improper operations and maintenance, or inadequate capacity due to undersized pipes.

You could taste, smell and see the old style engines. With the new engines, the impact is largely invisible and they tend to be much quieter.

—Mark Thurston



Abating these overflows is a top priority of EPA New England. We worked with numerous cities and towns last year to develop innovative pollution abatement strategies that maximize environmental protection while ensuring that the projects are affordable. Among the communities moving forward to curb their CSO discharges are Providence; Springfield; Holyoke; Haverhill; Fitchburg; Lowell; New Bedford; Manchester, N.H. and the Boston-area Massachusetts Water Resources Authority. The work will lead to noticeable water quality improvements in bays and rivers all across the region.

WATERSHED PROTECTION

From Long Island Sound to the Charles River to Casco Bay, EPA New England has been a leader in community-based watershed protection programs. Among our biggest successes was an agreement last year regarding the

cleanup of Long Island Sound. After years of negotiations, EPA, the states of New York and Connecticut and our community partners finalized a limit on the amount of nitrogen pollution that the Sound can safely handle. The limit, called a Total Maximum Daily Load (TMDL), allocates how much nitrogen can be discharged from point sources, such as sewage treatment plants, and nonpoint sources, such as storm water runoff. The TMDL builds on a 1998 agreement to cut the amount of nitrogen pouring into the Sound by 58.5 percent by 2014. Nitrogen pollution causes low levels of dissolved oxygen, a condition called hypoxia, which is the most serious water quality problem affecting the Sound.

Emboldened by the success of our watershed partnerships on Long Island Sound and the Charles River, EPA Administrator Christie Whitman this year announced a plan to target up to 20 of the country's most highly-valued watersheds for \$21 million of cleanup grants.

New Hampshire Marina Leads Way On Clean Engines

When Mark Thurston first heard the idea of selling low-pollution motorboat engines at the family's marina on Lake Winnepesaukee in Laconia, N.H., he was skeptical. Sure, the low-pollution engines are substantially cleaner than conventional two-stroke engines, which discharge up to 30 percent of their fuel directly into the water and air as pollution. But would boat owners be willing to pay the higher price tag for the cleaner engines, especially when there was no requirement to buy them until 2006?

"It was uncharted territory," said Thurston, whose marina was among the first to participate in the New Hampshire Clean Marine Engine Initiative, a voluntary program to accelerate the sale and use of low-pollution engines used on outboard boats and personal watercraft. Thurston is no longer a skeptic. Virtually all of the marine dealerships participating in the program exceeded the goal of selling 50 percent clean engines in 2000 and 75 percent in 2001. "We've been pleasantly surprised to the point where we're now stocking only 100 percent high-efficiency engines," said Thurston, whose brother, Jeff, helped initiate the Clean Engine Campaign when he was president of the N.H. Marine Trades Association.

Thurston says boat owners are attracted by the lower operating costs of the clean engines, which use substantially less gas and oil. But their biggest lure is that they protect the environment. "You could taste, smell and see the old-style engines," Thurston said. "With the new engines, the impact is largely invisible and they tend to be much quieter." EPA New England is now expanding the Clean Marine Engine Program to the other five New England states. The goal in those states is to sell 75 percent clean engines in 2002, 80 percent in 2003 and 95 percent in 2004 and 2005. EPA will begin mandating the sale of the cleaner engines in 2006.